"The Economy"

Excerpt From The
"Official Statement of the City of Boston, Massachusetts
General Obligation Refunding Bonds"
February 9, 1994

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February 9, 1994

THE ECONOMY

General

The City is the economic hub of both the Commonwealth and the New England region. It is a center for professional, business, financial, higher educational and medical services, as well as transportation, communications, export, cultural and entertainment activities. As a government center, the City is the state capital and is host to several federal offices. High technology, research and development, manufacturing and wholesale distribution also contribute to the economy of the City and its suburbs.

The City of Boston is the twentieth largest city in the United States and the center of the seventh largest Consolidated Metropolitan Statistical Area (CMSA) in the nation, consisting of the Boston Primary Metropolitan Statistical Area ("PMSA") plus the contiguous PMSAs of Lawrence, Haverhill, Salem/Gloucester, Brockton, and Nashua, New Hampshire. The Boston CMSA had a population of 4.2 million in 1990, as reported by the U.S. Department of Commerce, Bureau of the Census (the "Bureau of the Census"). In 1990, the City had a population of 574,283, as reported by the Bureau of the Census, and had 610,126 jobs as reported by the U.S. Bureau of Economic Analysis from data of the Massachusetts Department of Employment and Training. The ratio of jobs to population indicates that the City provides a direct source of employment and income for an area which extends well beyond its borders. Measured in terms of jobs, the City's economy comprises approximately 16 percent of the Massachusetts economy and 7 percent of that of the six New England states.

In 1982, the City began a six year period of growth during which its economy exceeded many measures of economic growth nationwide. Beginning in 1989 the City, along with the Boston metropolitan area and the New England region, experienced an economic decline which was followed in 1990 by a national economic downturn.

Recent economic data show evidence of improvement. For example, Massachusetts employment, which had declined by 321,000 jobs in the four years between 1988 and 1992, is now declining at a lesser rate. Data from the Bureau of Labor Statistics for 1992 showed a decline of only 20,000 jobs compared with a decline of 154,000 jobs for the previous twelve-month period. Monthly trends for January 1993 through October 1993 show a smaller decline in employment in 1993 than in the corresponding period in 1992. Also, unemployment rates, which peaked during the second quarter of 1991 in the Commonwealth at 10.3%, in the Boston metropolitan area at 8.4% and in the City at 9.3% all declined to levels between 5.2 and 6.1 percent in the Commonwealth, the Boston metropolitan area and the City by November 1993. Moreover, according to data regarding office market vacancy rates from CB Commercial, Boston ranked as the fifth best city out of the top 20 downtown office markets. Finally, residential sales improved markedly in 1991 and 1992, and have made further progress in 1993, as described more fully in "Housing Stock, Housing Values, and the Linkage Program," below. This rise in residential sales is most likely due to lower interest rates and prices.

Statistical Data

Statistical data relating to population, employment and income are derived primarily from four separate sources: the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, and the City of Boston/Boston Redevelopment Authority, each of which is described below.

The U.S. Census Bureau publishes information about population, housing and the economy. Data from the 1990 Decennial Census of Population and Housing is now available for the City. In addition, some monthly and quarterly data are available through second quarter 1993 on certain topics for the region, Massachusetts, and the Boston metropolitan area. The U.S. Census Bureau does not publish such interim data for the City.

The U.S. Bureau of Labor Statistics publishes data and reports about the workforce and related subjects including unemployment rates, area wages, and cost-of-living adjustments. Final data for 1992 are the most recent annual data available; the most recent monthly data are for November 1993.

The U.S. Bureau of Economic Analysis publishes quarterly and annual statistics on income and employment. The most recent annual figures are from the May, September and December 1993 revised series for the nation, Massachusetts, Metropolitan Counties and Suffolk County, which consists of the City plus the municipalities of Revere, Chelsea and Winthrop; the City comprises approximately 87% of the County's population and approximately 96% of its employment.

The City of Boston and the Boston Redevelopment Authority ("BRA") prepare reports and compile data on the population and economy of the City and its neighborhoods. BRA also provides data and trends from various local, regional, state and national sources on such topics as employment and occupation, large employers, city schools, universities and colleges, medical institutions, tourism and lodging, transportation, office and industrial markets, housing, building activity and urban redevelopment and infrastructure projects.

Statistical data do not necessarily reflect current activity because of delays resulting from the time required to collect, tabulate and publish such data. While the City believes that it has used the most recent data readily available to it in the discussion in this section, because of such necessary delays, the data contained herein may not reflect current conditions or trends. Additionally, statistical data are approximations and generalizations subject to various sources of error inherent in the statistical process, and may be revised on the basis of more complete data. Within such limits, the statistical data contained herein describe past activity and are not presented with a view to predicting future economic activity either in particular categories or in general.

New England, Massachusetts and Metropolitan Boston Economies

New England comprises a six-state region which has a combined population of 13.2 million persons and over 7.6 million jobs according to 1992 Bureau of Economic Analysis annual data. For most of the 1980s, the rate of growth in total personal income, per capita income and population for New England was higher than the national average. Beginning in 1989, this trend reversed as the New England economy began to slow down. While total personal income in New England grew at an annual average compound rate of 7.0% over the period from 1982 through 1992, exceeding the 6.7% national rate, in the most recent period for which data is available, from third quarter 1992 through third quarter 1993, personal income in New England grew at a rate of only 4.3%, trailing the 5.4% national rate. Employment in New England, which grew by 1,486,000 jobs from 1982 through 1988 at a rate of 3.4% annually, declined by 558,000 jobs from 1989 through 1992, resulting in a net gain of 928,000 jobs over the ten-year period. Annual data from the Bureau of Economic Analysis is not yet available for 1993.

The Massachusetts economy, with 6.0 million people and 3.5 million jobs, has slowed and even contracted in some respects since 1988. Total personal income grew at a 6.8% annual average rate from 1982 through 1992; by contrast, from third quarter 1992 through third quarter 1993, it grew by 5.0% which is below the 5.4% national average. Massachusetts gained nearly 677,000 jobs in the six-year period of 1982-1988, an average annual growth rate of 3.3%. It lost 321,000 jobs between 1988 and 1992 as mini-computer, defense and financial firms consolidated. The Commonwealth therefore had a net gain of 356,000 jobs during the period from 1982 through 1992. November 1993 data from the U.S. Bureau of Labor Statistics, adjusted to Bureau of Economic Analysis employment series for consistency, showed a loss of about 12,000 jobs during the first eleven months of 1993. The BRA, however, believes based on discussions with U.S. Bureau of Labor Statistics economists that full year data plus rebenchmarking will likely result in a small increase in 1993 employment.

The five-county Boston metropolitan area (consisting of Essex, Middlesex, Norfolk, Plymouth and Suffolk counties), which has 3.8 million people and 2.4 million jobs, has shown economic trends similar to those for the Commonwealth. Growth of 458,000 jobs from 1982 through 1988 was offset by the loss of 230,000 jobs from 1988 through 1992, for a net gain of 228,000 jobs. The most recent data from the U.S. Bureau of Labor Statistics showed a loss of about 8,000 jobs for 1993, but the BRA believes full year data plus rebenchmarking may show a small increase. These trends, except for 1993, are illustrated by the following chart; employment data for the City are set forth under "Employment Structure, Employment Trends and Occupational Changes" and its accompanying table.

Population, Income and Employment
1982-1992
(income in current year dollars)

	1982	1988	1989	1990	1991	1992
United States						
Total Personal Income ($000)	$2,683,556,000	$4,063,045,000	$4,367,719,000	$4,657,120,000	$4,833,548,000	$5,130,617,000
Per Capita Income ($)	11,584	16,615	17,696	18,668	19,169	20,114
Population (000)	231,661	244,541	246,820	249,471	252,154	255,077
Employment (000)	114,149	134,058	136,411	138,776	137,378	138,257
New England						
Total Personal Income ($000)	$ 157,225,323	$ 263,806,904	$ 281,390,592	$ 291,348,000	$ 296,082,000	$ 310,052,000
Per Capita Income ($)	12,610	20,159	21,347	22,035	22,439	23,488
Population (000)	12,468	13,086	13,182	13,222	13,195	13,200
Employment (000)	6,660	8,146	8,103	7,930	7,629	7,588
Massachusetts						
Total Personal Income ($000)	$ 73,684,413	$ 123,432,002	$ 131,247,646	$ 135,051,000	$ 137,119,000	$ 142,828,000
Per Capita Income ($)	12,767	20,638	21,818	22,434	22,870	23,811
Population (000)	5,771	5,981	6,016	6,020	5,996	5,998
Employment (000)	3,139	3,816	3,773	3,669	3,515	3,495
Metropolitan Boston (1)						
Total Personal Income ($000)	$ 49,879,082	$ 83,673,056	$ 89,015,636	$ 92,350,737	$ 93,756,367	NA
Per Capita Income ($)	13,560	22,186	23,502	24,402	24,899	NA
Population (000)	3,679	3,772	3,788	3,785	3,766	NA
Employment (000)	2,166	2,624	2,591	2,521	2,412	2,394*

(1) This metropolitan area, the New England Counties Metropolitan Area ("NECMA"), is larger than the CMSA. It includes five counties in Massachusetts (Essex, Middlesex, Norfolk, Plymouth and Suffolk) and one county in New Hampshire (Hillsborough).

*Preliminary, based on U.S. Bureau of Labor Statistics data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, May and September 1993 annual series.

Employment Structure, Employment Trends and Occupational Changes

Between 1982 and 1992, City employment continued to shift from traditional labor intensive manufacturing jobs to technology and service jobs, as shown in the table below, "City of Boston Employment, 1982-1992 Selected Years by Industry." Over the past ten years, the City's service industries, including transportation, communication, public utilities, finance, insurance and business and professional services, expanded their share of the City's total employment from 58% in 1982 to 64% in 1992, while the total employment in manufacturing and trade declined from 9% to 5% and from 15% to 13%, respectively. The economy of the Boston metropolitan area primarily rests on high technology, finance, professional and business services, defense, and educational and medical institutions. The City's economy is more specialized in the financial, business and professional services and educational and medical sectors than the suburban economy, which is more specialized in high technology and the defense industry. As used in this section, "business and professional services" includes many professions, such as law, accounting, engineering, advertising, and architecture, as well as business and miscellaneous services, i.e. data processing, bookkeeping, and building services.

The growth of 68,983 jobs from 1982 through 1988 was offset by the loss of 69,662 jobs from 1988 through 1992. Trends for 1992 showed much slower job losses occurring. The four-year loss of jobs is most evident in construction, wholesale and retail trade, transportation, communications, utilities, real estate and business and professional services, while gains are most evident for this period in the health care and securities industries. Preliminary 1993 data on employment, based on two quarters of data, shows a 1.3% increase or 8,000 jobs compared to the same period for 1992.

City of Boston Employment, 1982-1992 Selected Years by Industry

Industry	1982	1986	1987	1988	1989	1990	1991	1992
Fishing/Mining/Agriculture	1,187	1,304	1,351	1,412	1,295	1,247	1,214	1,178
Construction	12,324	14,728	15,815	16,045	15,382	13,054	10,862	10,114
Manufacturing	50,353	39,668	37,636	34,743	33,223	32,084	30,068	27,936
Transportation/Communication/Utilities	37,857	36,293	36,555	37,553	35,424	36,063	33,599	35,119
Wholesale Trade	26,386	26,359	25,744	23,485	22,224	19,648	17,160	16,189
Retail Trade	59,291	65,365	64,058	62,878	63,369	61,684	56,684	56,153
Finance/Insurance/Real Estate	81,368	91,302	96,197	96,695	90,226	87,091	83,261	81,308
Banking	23,802	28,254	27,620	27,939	26,237	22,916	20,501	21,116
Securities	9,708	14,648	18,900	19,687	20,242	21,504	22,569	23,518
Insurance	36,392	33,753	32,789	31,394	29,710	29,282	27,866	25,188
Real Estate and Other	11,467	14,646	16,889	17,675	14,036	13,389	12,325	11,486
Services	212,878	246,229	252,680	259,575	258,257	253,741	243,616	248,097
Hotel	7,878	10,930	11,802	12,270	13,015	13,025	11,960	11,777
Health	66,333	71,143	72,332	74,343	74,985	76,179	80,125	84,046
Educational	26,728	29,422	29,500	30,237	30,170	30,457	28,067	27,836
Cultural	5,831	7,672	7,737	9,375	10,634	9,357	8,332	9,021
Social and Nonprofit	20,172	22,054	21,463	22,636	22,742	23,104	21,759	22,300
Business and Professional	74,960	92,077	97,065	97,935	94,204	90,275	83,114	83,145
Personal and Repair	10,973	12,931	12,781	12,779	12,506	11,344	10,259	9,971
Government	89,370	100,102	104,170	107,611	106,250	105,041	98,231	94,240
Total	571,013	621,350	634,205	639,996	625,651	609,653	574,693	570,334

Source: 1982-1991 figures are mathematically derived from U.S. Bureau of Economic Analysis Series for Suffolk County ("BEA Series, May 1993, Revised") pro-rated to Boston geography. 1992 data are based on Massachusetts Department of Employment and Training (this series represents payroll jobs covered by the unemployment security system). These Boston employment data are used to derive an equivalent 1992 BEA series (for all jobs, full and part-time). Due to use of pro-rating factors, minor discrepancies of 1 to 3 units between totals and employment categories may result.

The Boston metropolitan area comprises about two-thirds of the Massachusetts state economy, which is interrelated with the economies of the other New England states. Consequently, the City's job losses since the peak of 1988 should be viewed in the context of regional job loss. The following table charts jobs lost in the region for 1988 through 1992. Data for Boston 1992 is preliminary.

Job Losses in the New England Region, 1988-1992

					1988–1992	
Area	1988–1989	1989–1990	1990–1991	1991–1992	Total Job Loss	Percentage Loss
New England	(43,661)	(172,960)	(300,889)	(41,030)	(558,540)	(6.9)%
Massachusetts	(42,820)	(104,577)	(153,989)	(20,052)	(321,438)	(8.4)
Metro Boston(1)	(33,615)	(69,771)	(108,416)	(18,090)	(252,920)	(9.6)
Boston	(14,345)	(15,998)	(34,960)	(4,359)	(69,662)	(10.9)

Note: (1) This metropolitan area includes the following five Massachusetts counties: Essex, Middlesex, Norfolk, Plymouth and Suffolk.

Source: U.S. Bureau of Economic Analysis (BEA) for 1988-1991, May 1993 series. Boston data derived from BEA Series and Department of Employment and Training (DET) employment data as described under "City of Boston Employment, 1982-1992 Selected Years by Industry." All percentages based on loss since 1988.
Data for Metropolitan Boston for 1992 were derived from the percentage change of Bureau of Labor Statistics (BLS) "790 Series" for Non-Agricultural Employment applied to BEA data.

As of 1990, 67% of City residents were white-collar workers, 17% were service workers and 16% were blue-collar workers, as compared to 60% white-collar workers, 18% service workers and 22% blue-collar workers in 1980. As the table below, "Occupational Change in the City's Resident Labor Force," shows, this trend among City residents away from blue-collar occupations and toward white-collar and service occupations has continued since 1960. Job losses from 1990 to 1992, as reflected in occupational employment data for the Boston metropolitan area by the Massachusetts Department of Employment and Training, show about equal losses for white-collar and blue-collar employees.

Occupational Change in the City's Resident Labor Force

	1960		1970		1980		1990	
	Number	%	Number	%	Number	%	Number	%
White-Collar	126,471	44%	146,657	55%	154,456	60%	191,251	67%
Professional & Technical	33,476	12	44,894	17	51,979	20	65,251	23
Managerial	15,604	5	15,035	6	25,238	10	41,955	15
Clerical & Administrative	58,990	21	71,655	27	58,451	23	56,950	20
Sales	18,401	6	15,073	6	18,788	7	27,095	9
Blue-Collar	96,576	34	75,160	28	54,452	22	47,498	16
Craftsmen	32,398	11	27,157	10	19,772	8	18,453	6
Operatives	52,175	18	36,695	14	24,825	10	19,971	7
Laborers & Farm	12,003	4	11,308	4	9,855	4	9,074	3
Service	38,034	13	44,688	17	47,109	18	49,955	17
Not Reported	27,115	9	—	—	—	—	—	—
Total	288,196	100%	266,505	100%	256,017	100%	288,704	100%

Source: U.S. Department of Commerce, Bureau of the Census for 1960, 1970, 1980 and 1990.
Percentages may not add due to rounding.

Unemployment

Unemployment in the City increased from a low of 3.2% in 1987 to a high of 8.5% in 1991. The City's average annual unemployment rate remained below the national rate through 1989 and equalled the national rate in 1990. Unemployment rates for Massachusetts and the New England region exceeded the national average in 1990 for the first time in more than a decade. November 1993 data show that the City's unemployment rate of 5.7% was lower than the national average of 6.1%, and below the Massachusetts rate of 6.1%. As the following table illustrates, 1993 monthly unemployment data show a general improvement over 1992 results which were an improvement from 1991. As of November 1993, 17,024 Boston residents were unemployed. The 1990 Census data for Boston, which differ from the Bureau of Labor Statistics rates shown below due to sample size, showed that when Boston's total unemployment rate was 8.3%, the rate for whites was 6.4%, the rate for all minority groups combined was 12.6%, and the rate for all youth aged 16-19 years was 18.9%. This pattern is typical of many of the nation's urban centers.

Annual Unemployment Rates

	1970	1975	1980	1982	1986	1987	1988	1989	1990	1991	1992
City	4.9%	12.8%	6.1%	9.1%	4.4%	3.2%	3.3%	3.9%	5.5%	8.5%	7.8%
Boston PMSA(1)	4.0	10.5	5.0	6.7	3.3	2.7	2.8	3.4	5.1	7.8	7.5
Massachusetts	4.6	11.2	5.6	7.9	3.8	3.2	3.3	4.0	6.0	9.0	8.5
New England	4.9	10.9	5.9	7.8	3.9	3.3	3.1	3.9	5.7	8.0	8.0
United States	4.9	8.5	7.1	9.7	7.0	6.2	5.5	5.3	5.5	6.7	7.4

(1) Primary Metropolitan Statistical Area, consisting of the City and 105 contiguous municipalities, with a population of approximately 2.8 million in 1990 according to U.S. Census data.

Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Department of Employment and Training for the City and Boston PMSA.

Monthly Unemployment Rates for Boston, Boston PMSA, Massachusetts, New England and the United States for 1991, 1992 and 1993(1)

	Boston			Metropolitan Boston			Massachusetts			New England			United States		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
Jan.	7.9	7.2	7.2	7.5	7.1	7.1	9.0	8.4	8.5	8.0	8.2	7.9	7.0	8.0	7.9
Feb.	8.7	7.1	7.2	8.2	7.1	7.0	9.9	8.5	8.3	8.6	8.5	7.5	7.2	8.1	7.7
Mar.	9.2	8.4	6.7	8.6	8.5	6.4	10.3	10.0	7.6	8.7	8.7	7.0	7.1	7.7	7.3
Apr.	7.6	7.6	6.0	7.2	7.5	5.7	8.3	8.6	6.6	7.6	8.2	7.0	6.5	7.1	6.8
May	8.9	7.5	6.3	8.1	7.2	5.8	9.2	8.2	6.6	8.0	7.4	6.7	6.6	7.2	6.7
Jun.	9.3	8.5	6.1	8.4	8.2	5.6	9.5	9.0	6.4	8.3	8.2	6.5	6.9	7.8	7.1
Jul.	9.2	8.4	6.4	8.2	7.8	5.8	9.4	8.7	6.6	8.2	7.8	6.2	6.7	7.6	6.9
Aug.	9.0	7.8	6.6	7.9	7.3	5.9	8.8	8.0	6.6	7.9	7.6	6.1	6.5	7.3	6.5
Sep.	9.1	8.1	7.2	8.0	7.7	6.3	8.9	8.4	7.1	7.9	7.7	6.2	6.4	7.2	6.4
Oct.	8.2	7.2	6.1	7.3	6.8	5.4	8.2	7.6	6.2	7.3	7.0	5.8	6.4	6.8	6.3
Nov.	7.6	7.7	5.7	6.9	7.2	5.2	8.0	8.3	6.1	7.6	8.0	N/A	6.6	7.0	6.1
Dec.	7.2	7.2	N/A	6.7	6.7	N/A	7.9	7.9	5.8	7.8	7.8	N/A	6.8	7.0	6.0

(1) Unemployment rates are not seasonally adjusted. Data preliminary and subject to revision.

Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Department of Employment and Training for the City and Boston PMSA.

Large Employers

The following table lists the ten largest private employers in Boston, which had an aggregate of approximately 58,000 employees in 1991, or approximately 12% of private sector employment:

Largest Private Employers in Boston, 1991
(listed alphabetically)

Bank of Boston Corporation	General Hospital Corp. (Massachusetts General Hospital)
Blue Cross & Blue Shield of Massachusetts	The Gillette Company
Boston University	John Hancock Mutual Life Insurance
Brigham & Women's Hospital, Inc.	New England Medical Center Hospitals
Children's Hospital Corp.	
FMR Corp. (Fidelity Investments)	

Source: Economic Development and Industrial Corp. of Boston, 1993, based in part on data from Dun and Bradstreet.

In addition, the public sector has large numbers of employees in the City. According to the Department of Employment and Training, there were over 94,000 government workers in the City in 1992, a reduction of 13,371 from 1988 levels. Certain state government offices, federal regional offices, U.S. Postal Service facilities and state-chartered authorities and commissions and the City's local government are all located within the City.

Labor Force and Education

According to U.S. Department of Commerce, Bureau of the Census, the City's resident labor force declined during the 1970s but increased during the 1980s. In contrast to the 12% decline in population between 1970 and 1980, the City's labor force (those residents aged 16 and over, available to work) declined by only 4%. The difference in these rates of decline was attributable to the fact that the decline in population was concentrated in the under-16 age group. Since 1980, both the increasing population and its increasing age have combined with the rising labor force participation of women, minorities, youth and the elderly to produce a larger labor force. By 1990, the City's population had increased by 2% over 1980 levels, while the City's labor force increased by 12.8% in the same period, according to data from the U.S. Bureau of the Census.

General improvement in educational attainment of residents aged 25 and over continued throughout the 1970-1990 period. The percentage of this population that had completed four or more years of college almost tripled during this period from 10.4% to 30%. This change, in part, reflected the trend for an increasing percentage of graduates of the City school system to seek higher education. This percentage increased from 25% in 1960 to 36% in 1970, 44% in 1977, 54% in 1982 and 66% in 1990, and declined to 58% in 1993, based upon Boston School Department figures. Improving educational attainment levels and shifting occupational patterns suggest a concurrent transformation of the City's work force as the City's economy has moved to a service-dominated base.

The City supports entry-level and advanced job training programs, including the following: English-as-a-Second Language training, pre-vocational and vocational training, adult literacy training, and support counseling. In addition, linkage contributions paid into the Neighborhood Jobs Trust provide a supplemental source of funding for job training programs. For a full discussion of the City's linkage program see "Housing Stock, Housing Values, and the Linkage Program."

Years of School Completed for Boston Residents Age 25 and Over, 1970-1990

	1970		1980		1990	
	Persons	Percent	Persons	Percent	Persons	Percent
0-8 years	91.582	26.1%	54,932	16.6%	37,824	10.3%
1-3 years of high school	71,511	20.4	49,407	14.9	51,051	14.0
High school graduate	120,350	34.3	115,787	35.0	97,233	26.6
1-3 years college	30,876	8.8	43,451	13.2	69,889	19.1
4 or more years of college	36,245	10.4	67,073	20.3	109,711	30.0
Total	350,564	100.0%	330,650	100.0%	365,708	100.0%

Source: U.S. Department of Commerce, Bureau of the Census; 1970, 1980 and 1990.

Income, Wages, and Cost of Living

Per capita personal income for Suffolk County was $24,625 in 1991, 28% above national per capita personal income of $19,169, according to the U.S. Bureau of Economic Analysis. An historical summary of per capita income shows that, from 1980 to 1990, Suffolk County's per capita income grew at a rate greater than that for the nation, in contrast to the 1970-1980 period when it rose at a slower rate. Suffolk County's per capita income grew at a faster rate than the per capita income growth rates for the United States, New England, Massachusetts and Metropolitan Boston (as defined in the chart below) between 1982 and 1990. The City's median household income (in current year dollars), based on U.S. Census data, rose from $7,835 in 1970, to $12,530 in 1980 and $29,180 in 1990. The figures in this paragraph and the chart directly below reflect earned income of persons residing in the named areas plus rents, interest and other unearned income and transfer payments from governmental entities. As such, these figures take into account certain income sources not included in the survey of average annual wages in the following paragraph, which reflects earned income of persons who work (but do not necessarily reside) in the named areas.

Per Capita Personal Income Comparison, 1970-1992
(in current year dollars not adjusted for inflation)

	United States	New England	Massachusetts	Metro Boston(1)	Suffolk County(2)
1970	$ 4,047	$ 4,445	$ 4,515	$ 4,539	$ 4,706
1980	9,940	10,582	10,659	10,766	10,562
1982	11,584	12,610	12,767	12,912	12,404
1985	14,155	16,084	16,371	16,719	15,864
1986	14,907	17,323	17,680	18,029	17,040
1987	15,638	18,626	18,998	19,391	18,213
1988	16,615	20,159	20,638	21,058	20,328
1989	17,696	21,347	21,818	22,215	21,735
1990	18,668	22,035	22,434	22,971	23,539
1991	19,169	22,439	22,870	23,480	24,625
1992	20,114	23,488	23,811	NA	NA

(1) Metropolitan Boston denotes the New England County Metropolitan Area (NECMA), which is larger than the Primary Metropolitan Statistical Area (PMSA); this consists of five Massachusetts counties and Hillsborough County in New Hampshire.

(2) City residents constitute approximately 87% of Suffolk County's population.

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, May and September 1993 Revised Series.

The December 1993 report from the U.S. Bureau of Economic Analysis indicates that average annual wages earned for 1992, by place of work, have been consistently higher in Suffolk County than in the Boston metropolitan area and the Commonwealth. Except for manufacturing and wholesale trade, wages in Suffolk County were higher for all major industry types. For all industries combined, Suffolk County's average wage level ($35,232) was 20.3% greater than that in the Boston metropolitan area ($29,285) and 22.6% greater than the average state wage level ($28,748). The average annual wage level reflects income earned by an individual from work in a particular industry.

During the ten years 1982-1992, based on the U.S. Bureau of Labor Statistics Consumer Price Index, the cost of living index rose at an annual average rate of 4.5% in the Boston metropolitan area, while the national index increased at a 3.4% annual rate. From November 1992 to November 1993, the cost of living in the Boston metropolitan area rose 2.7%, the same rate of increase experienced by the nation.

Population

The U.S. Census reported the City's population as 574,283 in 1990, a 2% increase over 1980 and the first increase since 1950. The number of households in the City increased from 217,622 in 1970, to 218,457 in 1980, and to 228,464 in 1990, while household size fell from 2.8 to 2.4 persons per household from 1970 to 1990. The Census Bureau population estimate for Massachusetts on July 1, 1992 was 5,998,000 or a reduction of 18,425 persons (−0.3%) from the 1990 census. The most recent local Census Bureau population estimate for Suffolk County is as of July 1, 1991, which showed a decline of 2% since April 1990, from 663,906 to 650,601.

Population of the Commonwealth and Boston Metropolitan Area 1970, 1980, and 1990

	1970	1980	1990	Change 1970-1980	Percent Change 1970-1980	Change 1980-1990	Percent Change 1980-1990
Massachusetts	5,689,170	5,737,037	6,016,425	47,867	0.8 %	279,388	4.9%
Metropolitan Boston	2,899,101	2,763,257	2,794,280(1)	(135,844)	(4.7)	31,023(1)	1.1(1)
City of Boston	641,071	562,994	574,283	(78,077)	(12.2)	11,289	2.0

(1) Because of a metropolitan area boundary change from Standard Metropolitan Statistical Area ("SMSA") to PMSA, the 1980-1990 change is based on a PMSA population of 2,805,911 in 1980. The 1970-1980 change is based on the SMSA, a slightly smaller geographic area than the PMSA, comprising 92 cities and towns.

Source: U.S. Department of Commerce, Bureau of the Census.

Medical and Higher Educational Institutions

The City's medical and educational institutions are an important component of its economy, providing employment opportunities for residents of the City and the Boston metropolitan area. Expenditures by the institutions' patients, students and visitors are important to the City's trade and service sectors.

Thirty-one in-patient hospitals are located within the City, including Massachusetts General Hospital, Brigham and Women's Hospital, Beth Israel Hospital, Children's Hospital, New England Deaconess Hospital, the New England Medical Center and Boston City Hospital. For further information on Boston City Hospital, see "Sources of City Revenue—Departmental Revenues—Department of Health and Hospitals" and "City Indebtedness—Boston City Hospital". The City is also the home of the medical and dental schools of Harvard, Tufts and Boston Universities, and of twenty-five public neighborhood health clinics, not including health maintenance organizations and membership clinics.

In 1992, there were an estimated 84,046 persons employed in health services in the City, based on U.S. Bureau of Economic Analysis data. Health services represent 1 out of every 7 jobs within the City. Growth in the health services sector has been stable, despite varying economic conditions. Data from the U.S. Census Bureau, County Business Patterns, showed that the number of hospital employees in Suffolk County between 1987 and 1991 grew from 47,154 to 56,861.

According to the BRA, the City's hospital and medical school community has invested $750 million in new facilities from 1984 to 1992, and from 1994 forward is expected to spend an additional $980 million on upgrading clinical facilities. Large new projects are currently under construction at the following City hospitals: Massachusetts General Hospital, Beth Israel Hospital, New England Deaconess Hospital, Boston City Hospital and New England Medical Center. In 1993, in response to pressure from a variety of sources to hold down health care costs, several Boston hospitals including University Hospital, Brigham and Women's Hospital, Carney Hospital, Franciscan Hospital, and Massachusetts General Hospital announced plans to reduce the size of their workforce. In addition, Massachusetts General Hospital has decided to scale back its construction program.

Based on data from the National Institutes of Health, the City is the nation's largest center for health research. The medical research institutions within the City received $550 million in National Institutes of Health awards in fiscal 1992, considerably more than any other city. This was a 6% increase (after adjusting for inflation) from fiscal year 1991. According to the National Institute of Health Division of Research Grants, six of the seven independent hospitals in the nation which received the most National Institutes of Health research funding in 1991 are located in the City. The BRA reports that privately-funded research in the City includes a $100 million, ten-year agreement between Dana-Farber Cancer Institute and Sandoz Pharmaceutical Ltd. Additionally, Massachusetts General Hospital received $46.6 million in fiscal 1992 from pharmaceutical, chemical and cosmetic companies to conduct corporate sponsored research. According to a 1991 BRA report, in 1990 the City's medical research institutions occupied nearly 2.7 million square feet of research space, and there was a demand for an additional 2.6 million square feet; approximately 707,000 square feet of new research space was occupied in 1991 and 1992.

In addition to these public and not-for-profit research facilities, over 100 biotechnology firms are located in the Boston metropolitan area. According to a 1990 Ernst & Young study, "Biotech 91: A Changing Environment," the Boston metropolitan area is the nation's second largest center for biotechnology by total revenue, and third largest by number of firms.

As of 1992, the New England Board of Higher Education reported 68 colleges and universities in the Boston metropolitan area, at which approximately 240,000 students were enrolled. The City's 29 universities, colleges and community colleges had a combined enrollment in fall 1992 of approximately 105,937, a 1.1% gain from fall of 1990. In addition, some graduate schools of Harvard and Tufts Universities, whose principal campuses are in Cambridge and Medford, respectively, had nearly 4,000 students in the City in 1992. Based on total graduate and undergraduate enrollment, Northeastern University is the largest university in Boston, with 27,619 students in 1992.

Educational institutions are a source of new highly skilled professionals for the City's labor force. For example, according to the Massachusetts Institute of Technology, although only 10% of its enrollees over the decade of the 1980s were from the Boston area, 24% remained in the area after graduation.

By the end of calendar year 1993, large projects at educational institutions in the City accounted for approximately $240 million of investment over the prior 24-month period, according to the BRA. These include new construction at Boston University, Northeastern University, Tufts University, Boston College, the Massachusetts College of Pharmacy and Harvard University.

Tourism

According to the Greater Boston Convention and Visitors Bureau ("CVB"), an estimated 8.76 million people visited the Boston metropolitan area in 1992, nearly reaching the peak of approximately 8.80 million visitors in 1988. These visitors, measured as tourists, business travelers and convention and meeting delegates who travelled at least 100 miles to get to the City, had an estimated total economic impact upon the Boston metropolitan area of $6.8 billion in hotel accommodations, meals, entertainment, shopping, transportation and other services during 1992, according to the CVB. Data for 1993 are not yet available.

A growing number of visitors to the City are visitors to conventions, trade shows and exhibits. The CVB reports that in 1992, approximately 1.13 million persons are estimated to have attended such functions in the City, an increase of 13% from 1988. According to national figures from a 1990 survey by "Business Travel News," the City ranked as the 21st largest convention city in the nation in 1989 with 525,000 convention

delegates. Trade and gate show visitors and meeting attendees accounted for another 475,000 in 1989. The John B. Hynes Veterans Memorial Convention Center, the World Trade Center and the Bayside Exposition Center have a combined capacity of over one million people per year, assuming use at full capacity on a daily basis.

The number of visitors in 1992 reflected an increase of 6.83% in convention, tourism and business visitors over 1991 results. Several large conventions occurred in 1992, notably MacWorld Expo, which drew 48,000 people. Other significant conventions included DECWorld, the National Science Teachers Convention, and the International Seafood Show. In the tourism category, Sail Boston 1992, the tall ships flotilla, drew an estimated 6 million attendees, including visitors (as defined above) and local residents who directly spent an estimated $315 million in restaurants, shops, and hotels with a total estimated economic impact of $500 million.

The City provides a venue for concerts, ice shows, circuses, plays, and other entertainment and sports events. The City is home to three major league sports franchises: the Boston Red Sox baseball team, the Boston Bruins hockey team and the Boston Celtics basketball team. A new privately financed, multi-purpose arena in Boston's North Station District is under construction by the New Boston Garden Corporation, a subsidiary of Delaware North, owner of the existing Boston Garden/North Station.

Hotel Market

The BRA reports that from 1980 through 1989, fourteen hotel projects, including eleven new hotels and three additions to existing hotels, added 4,885 new rooms to the City's hotel stock. The number of hotel rooms in the City has risen from 6,907 in 1980 to 11,792 by 1991, an increase of 71%. From 1980 through 1988 annual occupancy rates were in the range of 68% to 76% even as many new rooms were completed and average room rates continued to rise. The occupancy rate peaked at 74.5% in 1988 and then declined slowly to a rate of 68.3% in 1991. In 1992, the rate improved to 72.3% compared to a national average of 66.8%. Data available for the first eleven months of 1993 show a 77.8% occupancy rate compared with 74.5% for the same eleven month period in 1992. According to Hospitality Valuation Services, a trade association, a hotel occupancy rate of 65% is generally considered to be profitable in the lodging industry.

In late 1993 the newest hotel in the City was completed which is the 270-room Hyatt Hotel and Conference Center at Logan International Airport. Several other new hotels have been proposed, but since required approvals have not been obtained no completions would occur before 1995. A new 330-room hotel project, to be located on Northern Avenue across from the World Trade Center at Commonwealth Pier by John Drew Company, has received all the approvals to begin construction in 1994.

Transportation

The City is a major national and international air terminus, a seaport and the center of New England's rail, truck and bus service. The City is served by three limited-access interstate highways which connect it to the national highway system: U.S. 90 (the "Massachusetts Turnpike"), which leads westward from downtown Boston to the New York State border; U.S. 95, the East Coast's principal north-south highway, which connects Boston to Portland, Maine to the north and New York City and Washington, D.C. to the south; and U.S. 93, another north-south highway, that extends from just south of the City to New Hampshire and Maine. The City is also served by two national railroads, Amtrak and Conrail, a regional rail carrier, Boston and Maine (a subsidiary of Guilford Transportation Industries), and Bay Colony (a short-line carrier).

Transportation planning includes both major highway and mass transit programs. Federal transportation legislation has enabled the Massachusetts Bay Transportation Authority (MBTA), which provides commuter rail, subway, local bus and express bus services to 78 cities and towns in eastern Massachusetts, to receive approximately $3.8 billion between 1965 and 1993. Transportation planning for mass transit facilities in the City is mainly under the auspices of the MBTA. In addition to federal money, since 1983, the MBTA has undertaken capital projects in the amount of $3.5 billion, most of which comes from state bond issues. The MBTA's current capital program includes a variety of expansion and rehabilitation projects; its five year program anticipates spending $300 million annually.

Other MBTA capital funds will go toward the ongoing improvement, renewal and modernization of equipment, facilities, service utilities, tunnels and bridges. MBTA capital program projects are funded through the federal government and MBTA bonds and certificates of participation. For a discussion of the City's obligation with respect to the MBTA, see "City Indebtedness—Indirect Debt."

Work is underway on the MBTA's North Station Transportation Center Project, which includes construction of an underground parking garage and a new commuter rail terminal. The new subway superstation, as well as the relocation of the existing light rail viaduct to an underground structure, is planned and is awaiting funding by the MBTA. The MBTA's South Station Transportation Center project continues with the construction of an intercity bus terminal and parking garage above the existing rail terminal. The MBTA is planning to begin limited commuter rail service to Worcester in the fall of 1994 with full service planned for 1996. The MBTA is planning to restore commuter rail service on the Old Colony Rail Line, which will provide commuter rail service to several of Boston's South Shore suburbs. About 70 percent of the cost of this project will be funded by the federal government. State monies and bond funds will pay for the remaining share. Construction of a portion of this project, involving two rail spurs, began in early 1993 and is anticipated to be completed by 1996. The MBTA is still seeking necessary approvals and appropriations for a third rail spur on this line.

The South Boston Piers Transitway/Light Rail Project is a $340 million long range plan to connect South Station with the proposed new Federal Courthouse at Fan Pier and the World Trade Center. The Final Environmental Impact Report was completed in December 1993 and the Final Environmental Impact Statement is now being reviewed by the Federal Transit Administration and the Massachusetts Executive Office of Environmental Affairs. Approval of the project is expected in February of 1994. Congress authorized funds to study the feasibility of this project in the Intermodal Surface Transportation Efficiency Act of 1991.

Amtrak is spending $170 million during 1994, as part of a multi-year infrastructure project of $865 million, to increase the speed of rail service between Boston and New York City, and expects to complete electrification of the Boston to New Haven, Connecticut corridor by 1997. Amtrak is currently experimenting with high-speed train sets, which, when combined with electrification, could drop the rail travel time from downtown Boston to downtown New York City to under three hours, which is competitive with air travel. At the present time, Amtrak is pursuing an acquisition program to procure at least 26 of the high-speed trains and at least six different possible vendors have emerged who may compete for the bid. Revenue for the trains is separate from the infrastructure project and has been appropriated.

The federal "Intermodal Surface Transportation Efficiency Act of 1991" authorized several of these projects described above; specifically the South Boston Piers Transit planning and Amtrak electrification.

See "Large Public Sector Projects" for a description of the depression of the Central Artery and the construction of a third tunnel under Boston Harbor, two other significant transportation projects in the City.

Seaport and Airport

The Massachusetts Port Authority ("Massport") was created by the state legislature in 1959 to stimulate and support the Commonwealth's economy through development and management of the City's major air and sea transportation centers and the Tobin Memorial Bridge over the Mystic River. Massport is financially independent, and the City is not responsible for any debt or other obligations incurred by Massport. Heavy use of Boston Logan International Airport ("Logan Airport") and the Port of Boston has compelled significant expansion of both facilities. Massport spent a total of $747.0 million consisting of $422.0 million on airports and $325.0 million on Tobin Bridge, maritime, development and other capital spending projects from 1981 through 1993.

The Port of Boston serves the six-state New England region and beyond as a natural deep-water berth, and provides access to world ports as well as feeder service several times weekly to Halifax, Canada and the Port of New York. The City's port activity includes handling bulk and general cargo, providing ship repair supply services, offering customs and international trading services, providing storage facilities and other commercial maritime services.

The City's port tonnage fell from the 1950s through the mid 1980s as a result of changes in transportation technology and in the regional economy. In 1990, according to the U.S. Army Corps of Engineers, the Port of Boston ranked as the 21st largest American seaport by total tonnage shipped and as the 18th largest American seaport by foreign tonnage shipped. During fiscal 1992, one million tons of containerized cargo (highest in recent history) and almost 17 million tons of bulk cargo (commodities and raw materials) worth over $8 billion were shipped through the City's three public and 23 private container terminals.

Logan Airport in 1992 was served by 39 domestic and international airlines. In calendar year 1991, Logan Airport, serving a total of 21.5 million passengers, was the most active airport in New England, the twelfth most active in the United States and the 18th most active in the world, according to the Airports Association Council International (AACI). Total passenger volume at Logan Airport increased by 5.3% annually between fiscal 1979 and fiscal 1988. Between fiscal 1988 and fiscal 1992 Logan Airport's total

passenger traffic decreased at a 1.4% average annual rate, due primarily to the national and regional economic recession, events in the Persian Gulf and overall increases in airline fares. Preliminary results for calendar year 1993 indicate that 24.2 million passengers were served, a gain of 5.2% from the 23 million passengers of 1992.

Logan Airport also plays an important role as a center for processing domestic and international air cargo. According to AACI, in 1991 Logan Airport ranked 14th in the nation in total air cargo volume. Between fiscal 1988 and 1992 the total volume of air cargo handled at Logan Airport grew by 6.5%.

In 1993, Massport projected that it would spend an average of about $78 million annually during fiscal 1993 through 1997 for ongoing capital improvements to Hanscom Field, Logan Airport, Tobin Memorial Bridge and the port facilities, and for improvements and major maintenance at various Massport properties. Massport currently expects to finance these projects with a combination of bond proceeds, federal grants and internally generated funds.

Construction Activity

During the last two decades the public and private sectors carried out a major expansion of capital construction and investment activity. Private commercial development investment has added over 16 million square feet of office space to the physical inventory of the City since 1975, five times the amount built in the previous 35 years.

The following table sets forth the estimated potential construction activity in the City from 1982-1993, estimated as indicated in the notes to the table. It should be noted that the issuance of a building permit and payment of a fee do not necessarily result in construction activity.

Revenue from building permit fees during the three-year period of fiscal 1986, fiscal 1987 and fiscal 1988 indicated that the estimate of total potential construction activity for such period was $6.3 billion, or an annual average of $2.1 billion. Revenue from building permit fees in fiscal years 1989 and 1990 indicated that total estimated construction activity dropped by an average of $0.5 billion dollars in each year. After building permit revenues reached a low of $6,689,380 in fiscal 1991, they exceeded 1990 levels in fiscal 1992 and 1993, indicating estimated potential construction activity of approximately $1 billion in each of fiscal years 1992 and 1993.

Boston Building Permit Revenues and Estimated Potential Construction Activity
Fiscal Years 1982-1993

Fiscal Year	Building Permit Revenues(1)	Estimated Potential Construction Activity(2)	Estimated Potential Construction Activity Adjusted For Inflation(3)
1982	$ 3,305,857	$ 388,924,353	$ 626,073,349
1983	5,196,160	611,312,941	940,195,587
1984	5,594,683	658,198,000	976,680,903
1985	7,435,576	874,773,647	1,246,860,466
1986	13,108,134	1,542,133,412	2,080,852,017
1987	13,504,134	1,588,721,647	2,104,432,339
1988	14,431,173	1,697,785,059	2,145,909,841
1989	11,423,439	1,343,934,000	1,581,466,521
1990	8,119,487	955,233,793	1,066,209,484
1991	6,689,380	786,985,833	830,768,077
1992	9,136,207	1,074,847,882	1,115,255,697
1993	8,832,324	1,039,096,941	1,039,096,908
Total	$106,776,554	$12,561,947,508	$15,753,801,189
Annual Average 1982-1993	$ 8,898,046	$ 1,046,828,941	$ 1,312,816,766

(1) Building permit revenues in current dollars.

(2) Potential construction activity estimated by dividing permit revenues by 0.85%, which is the midpoint between permit fees calculated at 0.7% of the first $100,000 estimated value of development cost and 1% for the remainder of development cost.

(3) Estimated potential construction activity adjusted to January, 1993 constant dollars.

Source: City of Boston, Auditing Department and Boston Redevelopment Authority's Policy Development and Research Department.

Large Public Sector Projects

During the balance of the 1990s the Boston metropolitan area will be the site of several major public sector projects. These projects include the depression of the Central Artery, the section of Interstate-93 that runs through downtown Boston, which is the key six-lane elevated interstate highway that carries traffic through the City, and the construction of a four-lane tunnel under Boston Harbor (together, the "Transportation Projects"). At present, the Central Artery connects with the Sumner and Callahan Tunnels, two two-lane tunnels under Boston, which link downtown Boston with Logan Airport and points north. The Transportation Projects, which are intended to improve traffic flow within the City, are under the control of the Commonwealth. It is estimated that the Transportation Projects will employ about 5,000 on site workers and 10,000 auxiliary workers during the mid-1990s (the peak years of construction). Construction of the Transportation Projects is estimated to cost over $7.7 billion. Federal funds will cover approximately 86% of this cost, and the Commonwealth will cover the remainder. In 1987 Congress authorized $1.9 billion for the first five years of the project, 1987 through 1992. In 1992 Congress authorized another $3.7 billion for the years 1993 through 1998. Although these expenditures have been authorized, they are subject to annual appropriation by Congress. The project is due for another authorization by Congress in 1998. The Commonwealth's contribution over the life of the project is expected to be approximately $1.0 billion, to be appropriated annually. It is expected that appropriations will be made in annual increments by the Commonwealth as the work progresses, although this cannot be guaranteed.

The Massachusetts Port Authority has developed a long range capital program of approximately $2 billion for improvements at its facilities, most of which are located in the City. The capital program is expected to accommodate parking and vehicle unloading, to increase roadways and terminal and cargo capacity, and to result in other improvements, principally at Logan Airport.

The Massachusetts Water Resources Authority ("MWRA"), an independent state authority, is constructing one of the largest wastewater treatment facilities in the nation (the "Treatment Facility Project"). This project, which is being undertaken pursuant to a federal district court order, is scheduled for completion in 1999 as part of MWRA's capital improvement program with a cost of approximately $4.8 billion (1994 dollars). Through fiscal 1993, approximately $1.8 billion of work has been completed. The project is intended to bring wastewater discharges in Boston Harbor in compliance with federal and state requirements. It is being funded through state and federal grants and the issuance by MWRA of revenue bonds backed by rates and charges paid by users. Such rates and charges are expected to continue to increase significantly each year, dictated in large part by increased debt service costs in connection with financing the court ordered portions of the capital program, and are expected to have a substantial financial impact on the local bodies served by MWRA, including the Boston Water and Sewer Commission ("BWSC").

The City is not directly responsible for the costs of any of these projects, although the BWSC, as a major user of water and sewer systems, is expected to bear some cost of the Treatment Facility Project indirectly through increased user fees. See "City Indebtedness—Related Authorities and Agencies—Boston Water and Sewer Commission." The City is currently negotiating with the Commonwealth to receive mitigation payments for any City services (such as fire and police) which may be required to support the Transportation Projects. No such services are expected to be required for the Treatment Facility Project.

Office Market and New Development

The City currently has 49 million square feet of office space, of which 37 million is Class A (the most expensive category), and 12 million is Class B or C. From 1977 through 1983, local office occupancy surveys reported a consistent decline in vacancy rates, reaching 2.0% in 1983. With the addition of over three million square feet of office space in 1984, the vacancy rate rose to 11.5% by the end of that year. However, net absorption of over two million square feet was the highest in a decade. In 1986 and 1987 demand of over two million square feet annually outpaced office completions, sending vacancy rates down to 5.2% by the end of 1987. During 1988, completion of over three million square feet of new and renovated Class A office space

and a decline in absorption to 1.0 million square feet brought the vacancy rate for such space up to 12.0%. (Figures for 1988 and later reflect Class A space only.) In 1989, office market absorption of 796,000 square feet, and the addition of about 718,000 square feet, reduced vacancy rates to 11.5%. Vacancy rates at year-end 1990 were 14.6% with an annual absorption rate of 583,000 square feet, when 1.9 million square feet of new office space was added.

New office construction added during 1991 totalled 905,513 square feet of office space in two buildings. The total amount of space absorbed in 1991 was a negative 163,381 square feet, driving the vacancy rate upwards. At year-end 1991, the downtown Boston office vacancy rate had risen to 17.1%, according to the BRA. As of the end of 1992, the BRA reported that the vacancy rate had come down to 15.0% as 785,283 square feet were absorbed. Only one new building, International Place Phase 2, was completed in 1993, bringing 750,000 square feet of new office space into the downtown market.

No new office buildings are expected over the following two to three years. At mid-year 1993 the most recent vacancy rate for Boston, as done by the BRA, was reported to be 16.0%. Absorption has been improving but several events may affect the office markets adversely in the 1994-1995 period. These are the consolidation plan by both AT&T and IBM in Boston, as well as the downsizing by NYNEX.

Even though Boston's downtown market vacancy rate is high compared to 1980s levels, it remains below the national average, as determined by Coldwell Banker, a real estate brokerage corporation, in the following chart. Coldwell Banker reported a September 30, 1993 vacancy rate of 14.6% for downtown Boston.

Comparative Office Vacancy Rates
20 Largest Downtown Office Markets as of September 30, 1993

City	Vacancy Rate	City	Vacancy Rate
Washington, D.C.	9.3%	Chicago	19.8%
San Francisco	12.9	Kansas City	20.7
Manhattan, Midtown	13.2	Phoenix	20.7
Seattle	13.5	Detroit	20.8
Boston	14.6	Houston	20.9(1)
Minneapolis-St. Paul	16.0	Baltimore	21.7
Philadelphia	16.5	Manhattan, Downtown	21.8
Cincinnati	17.3	Cleveland	22.2
Los Angeles	17.7	Atlanta	23.2
Denver	17.9	Dallas	31.5

National Average(2) 16.9%

(1) Houston rate is for June 30, 1993.
(2) National Average is based on 45 U.S. cities from the CB Commercial Office Vacancy Index.
Source: CB Commercial Office Vacancy Index, September 30, 1993.

Retail Market

As of 1990, the date of the last decennial census, the City was within the ninth largest metropolitan retail market in the nation, consisting of the City plus the Massachusetts municipalities of Lowell, Lawrence, Salem and Brockton. Of the approximately 10 million square feet of retail space in the City, approximately six million square feet are located in downtown Boston and Back Bay. About 4,347 retail stores are located in the City. According to the U.S. Census of Retail Trade, retail sales in the Boston metropolitan area declined between 1989 and 1991. From 1991 to 1992 they increased by 6.8% to $30.6 billion. Retail sales in the Boston metropolitan area for the first eleven months of 1993, compared to the same period in 1992, showed a rise of 5.2%.

Metropolitan Boston Retail Sales, 1988-1993
(In millions, not adjusted for inflation)

	1988	1989	1990	1991	1992	1993
January	$ 2,063	$ 2,079	$ 2,089	$ 1,942	$ 2,208	$ 2,461
February	2,090	2,034	2,020	1,972	2,261	2,392
March	2,353	2,342	2,342	2,251	2,449	2,645
April	2,316	2,316	2,267	2,209	2,455	2,634
May	2,464	2,565	2,488	2,462	2,605	2,679
June	2,490	2,456	2,423	2,477	2,619	2,727
July	2,276	2,223	2,217	2,334	2,470	2,474
August	2,355	2,462	2,410	2,445	2,450	2,591
September	2,439	2,416	2,345	2,595	2,540	2,679
October	2,377	2,361	2,289	2,438	2,635	2,726
November	2,479	2,553	2,468	2,566	2,644	2,756*
December	3,041	3,022	2,761	2,981	3,290	N/A
Annual	28,743	28,829	28,119	28,672	30,626	N/A

*Preliminary.

Source: U.S. Department of Commerce, Bureau of the Census, "Current Business Reports: Monthly Retail Trade". Compiled by Boston Redevelopment Authority's Policy Development and Research Department. Data are for the five counties in metropolitan Boston: Essex, Middlesex, Norfolk, Plymouth and Suffolk.

Industrial Market and Recent Developments

As of June 1993, according to the Economic Development and Industrial Corporation of Boston ("EDIC"), over 20 million square feet of industrial space was located in the City. The vacancy rate was 31.9%, with 5.3 million square feet unoccupied. The average rent for quality industrial space was estimated to be approximately $4.98 per square foot. In addition, there were 3.3 million square feet of industrial research and development space in the City, which was 19.3% vacant with 642,000 square feet available. The average rent was estimated to be $10.60 per square foot.

According to information from EDIC, five million square feet were acquired and/or rehabilitated in the City for industrial use from 1983 through 1989. Among these projects were the multi-million dollar expansions by Teradyne, Inc., H.P. Hood Inc., EDIC's Industrial Center at the former Boston Army Base and the Marine Industrial Park, renovation of the former Schrafft's factory in Charlestown for high-technology industry, and private investments in rehabilitation for industrial use of the Stonybrook Commerce Center, the Haffenreffer Brewery in Jamaica Plain and the Howden Sirocco plant in Hyde Park.

During 1990 and 1991, significant developments included Groupe Bull's investment of $17 million in the City; its decision to consolidate its North American manufacturing resulted in the addition of a shift at its Brighton plant. A Cambridge-based biotechnology firm. Genzyme Corporation, started construction in 1992 of an $85 million biopharmaceutical manufacturing plant in Allston. Genzyme plans to build further manufacturing, research and development and headquarters facilities on the site during the 1990s.

Certain companies have been forced to lay off employees as a result of recent economic conditions in the City. For example, Digital Equipment Corporation (DEC) recently closed its Roxbury plant, and Stride Rite Corporation has announced its intent to close its plant in Roxbury by April 1994. These plant closings will eliminate a total of 350 manufacturing jobs, representing about one percent of the City's industrial jobs. It is possible that Stride Rite Corporation may build a new distribution facility elsewhere in the City but the company is also considering other sites outside of the City. The City's administration is actively working to ease the impact of these losses and find replacement companies for the plant facilities left behind.

Housing Stock, Housing Values, and the Linkage Program

The U.S. Census reported in April 1990 that the City's housing stock consisted of 250,863 units. From 1980, the date of the previous decennial census, through 1990, over 9,400 net new housing units were added to the supply. The composition of housing is changing. The number of private rental apartments declined between 1980 and 1990, mainly due to condominium conversions. Condominium units increased from about 4,500 in 1980 to over 33,000 in 1990, or 13% of the housing stock. Units in 1-4 family homes increased between 1980 and 1990, and now constitute over 50% of the City's housing stock. More than 80% of these structures are owner-occupied. Despite the loss of rental units since 1980, over 5,000 net new units have been added to publicly-assisted housing. In 1990, public and publicly-assisted housing constituted 17% of the City's housing stock.

Within the City, the U.S. Census reported that the median sales value of a single-family home was $161,400 in 1990. The U.S. Census also reported that the median contract rent in the City was $546 per month in 1990, when market rate units and subsidized units were combined. The City's gross housing vacancy rate in 1990 was 9%, with an estimated 6% net vacancy rate (representing units readily available for occupancy).

Greater Boston Annual Median Housing Sales Prices
(For existing homes)

Year	Housing Prices	Percent of Change
1980	$ 71,700	—
1981	73,900	3.1%
1982	80,200	8.5
1983	82,600	3.0
1984	100,000	21.1
1985	134,200	34.2
1986	159,200	18.6
1987	177,200	11.3
1988	181,200	2.3
1989	181,900	0.4
1990	174,100	(4.3)
1991	170,100	(2.3)
1992	171,100	0.6
1993	171,000*	(0.7)*

*1993 is an average of the first three quarters of the year (unweighted) and compares with $172,200 for the same period in 1992, a 0.7% decline.

Source: National Association of Realtors and the Greater Boston Real Estate Board.

The National Association of Realtors reported that the median sale value of homes in the Boston metropolitan area was $181,900 for 1989, $174,100 for 1990, $170,100 for 1991 and $171,100 for 1992, a 0.6% increase from 1991 prices. Prices, based on the average of the first three quarters of 1993, were at $171,000, a 6.0% decline from the peak in 1989. Banker & Tradesman, a local trade journal, stated in its third quarter report, "Market Briefings," that during the first nine months of 1993 there were 18.1% more residential sales in the City then there were in the first nine months of 1992 (2,189 versus 1,853) while condominium sales increased by 16.0% over the same period (1,831 versus 1,578).

The City implemented its development linkage program in December 1983, in order to direct some of the benefits of downtown investment to the building of affordable housing in its neighborhoods. Under the program, real estate developers seeking approval of large scale commercial or institutional developments are required to enter into agreements obligating them to make "linkage payments" to the Neighborhood Housing Trust in an aggregate amount of $6 per square foot of construction over 100,000 square feet, of which $1 per square foot goes to a job training fund and $5 per square foot goes for housing purposes. These linkage payments are amortized over a period of either seven or twelve years, depending on the date of the initial agreement. Current agreements provide for a seven-year payment period. The seven-member Neighborhood Housing Trust holds public hearings and, together with the Boston Redevelopment Authority, approves linkage grants to selected projects. As of June 30, 1993, developers of 43 projects completed or in construction were committed to pay $55.3 million under this program. $33.7 million of this money already has been allocated for the construction or renovation of 3,800 housing units in the City's neighborhoods. Affordable housing units for low and moderate-income residents comprise 84% of this total.